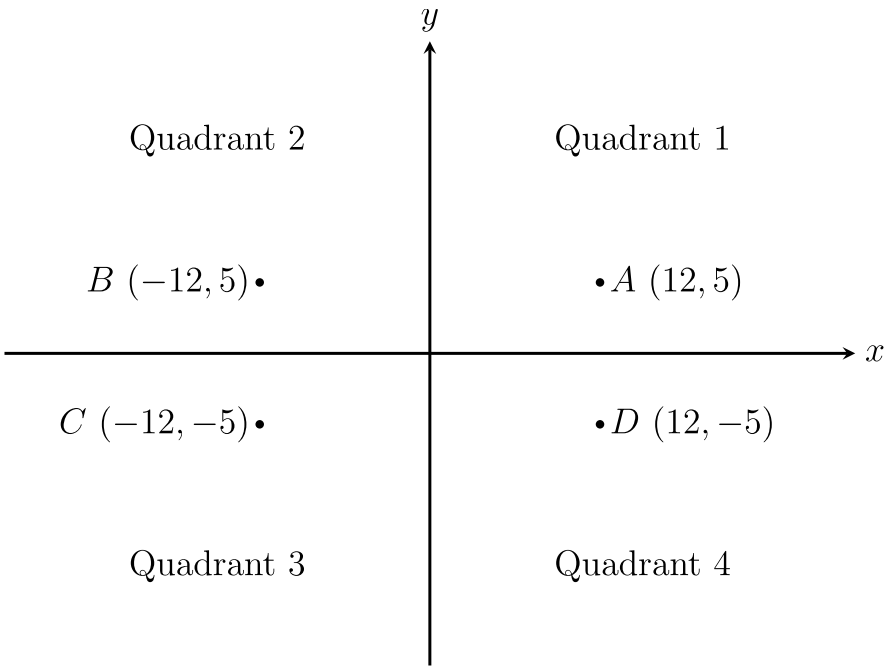
CCC '17 J1 - Quadrant Selection

Time limit: 1.0s **Memory limit:** 256M

Canadian Computing Competition: 2017 Stage 1, Junior #1

A common problem in mathematics is to determine which quadrant a given point lies in. There are four quadrants, numbered from 1 to 4, as shown in the diagram below:



For example, the point A, which is at coordinates $(12, 5)$ lies in quadrant 1 since both its x and y values are positive, and point B lies in quadrant 2 since its x value is negative and its y value is positive.

Your job is to take a point and determine the quadrant it is in. You can assume that neither of the two coordinates will be 0.

Input Specification

The first line of input contains the integer x $(-1\,000 \leq x \leq 1\,000; x \neq 0)$. The second line of input contains the integer y $(-1000 \leq y \leq 1000; y \neq 0)$.

Output Specification

Output the quadrant number (1, 2, 3 or 4) for the point (x, y).

Sample Input 1

```
12
5
```

Sample Output 1

```
1
```

Sample Input 2

```
9
-13
```

Sample Output 2

```
4
```